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In the Claims:

1-21. (Canceled)

22. (Currently Amended) A monolithic optical transmitter and receiver pair comprising:

a semiconductor substrate;

an optical transmitter formed on a portion of said substrate; and

an optical receiver formed on said substrate, laterally adjacent to said optical transmitter, said optical receiver optically and electrically isolated from said optical transmitter eliminating cross-talk between said receiver and said transmitter thereby allowing said transmitter and optical receiver to operate entirely independent from one another.

23. (Previously added) The device of claim 22 wherein said optical receiver further comprises:

a photodiode.

24. (Previously added) The device of claim 22 wherein said optical transmitter further comprises:

a VCSEL having a plurality of layers.

25. (Previously added) The device of claim 24 wherein said VCSEL further comprises:

an isolation region defining discrete areas of active VCSEL layers and discrete areas of inactive VCSEL layers.

26. (Previously added) The device of claim 25 further comprising:

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means for disabling inactive VCSEL layers.

27. (Previously added) The device of claim 22 wherein said optical transmitter further comprises:

first mirror layers formed on said substrate;
a first cladding layer formed on a topmost first mirror layer;
an active region formed on said first cladding layer;
a second cladding layer formed on said active region; and
second mirror layers formed on said second cladding layer.

28. (Previously added) The device of claim 27 wherein said active region further comprises:

at least one quantum well layer.

29. (Previously added) The device of claim 28 wherein said first and second mirror layers further comprise:

epitaxially grown distributed Bragg reflectors.

30. (Previously added) The device of claim 22 wherein said optical receiver further comprises:

a photodiode formed on a topmost second mirror layer of said inactive VCSEL layers.

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31. (Previously added) The device of claim 22 wherein said optical receiver further comprises:

- a p-type layer formed on a topmost second mirror layer of said inactive VCSEL area;
- an intrinsic layer formed on said p-type layer;
- an n-type layer formed on said intrinsic layer;
- a photodiode cathode contact formed on said n-type layer; and
- a photodiode anode formed on said topmost second mirror layer.

32. (Previously added) The device of claim 26 wherein said means for further comprises:

- an electrical short circuit between said substrate and said photodiode anode.

33. (Previously added) The device of claim 22 further comprising:

- a non-reflective coating on said optical receiver.

34. (Previously added) The device of claim 22 wherein said optical receiver further comprises:

- a photodiode formed on said semiconductor substrate.

35. (Previously added) The device of claim 31 wherein said photodiode further comprises:

- a metal-semiconductor-metal photodiode.

36-39. (Canceled)